



FAA
Air Traffic Organization

Performance: ***Our Bottom Line***

2006 Annual Performance Report

Safe	23	On Time
Efficient	35A	On Time
Professional		On Time
Focused	23A	On Time
Responsive	18A	On Time
Innovative	32A	On Time
Performance	35A	On Time
	17	On Time
	32	On Time

MISSION

Our mission is to provide the safest, most efficient aerospace system in the world.

VISION

- » We continue to improve the safety and efficiency of flight.
- » We are responsive to our customers.
- » We are accountable to the public.

ABOUT THE AIR TRAFFIC ORGANIZATION

The primary service of the Air Traffic Organization is to move aircraft safely and efficiently. Our customers are commercial and private aviation and the military. Our employees are the service providers—the air traffic controllers, technicians, engineers and support personnel whose unflagging daily efforts keep the airplanes moving.

Nine service units make up the Air Traffic Organization:

- » Acquisition and Business Services
- » Communications Services
- » En Route and Oceanic Services
- » Finance Services
- » Operations Planning
- » Safety Services
- » System Operations Services
- » Technical Operations
- » Terminal Services

Air Traffic Organization

Performance: *Our Bottom Line*

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“The stakes are high.
Aviation is the lifeblood
of the economy.
Conservatively, it accounts
for 5.5 percent of U.S. gross
domestic product, about 10
million American jobs and
\$343 billion each year
in earnings.”

- Marion C. Blakey

Letter from the Administrator



FAA Administrator Marion C. Blakey
Photo: Thomas Clarke, FAA

To the Congress of the United States of America:

In 2003, the Air Traffic Organization (ATO) committed to its owners and customers that one of its goals was to implement a comprehensive and highly effective business planning process. Today, we are seeing the results of this process—our major capital programs are on time and within budget, an unheard of development just a few short years ago and, in just the third full year of operation, the ATO met all its safety goals by reducing runway incursions and operational errors. This performance is a great credit to the skilled men and women who make up the ATO.

Through efficient management of both human and financial resources, the ATO has laid the foundation for the development of the Next Generation Air Transportation System (NextGen). In fact, many of the systems and programs are already in place to begin transforming the National Airspace System (NAS) into the sustainable system we need to efficiently and effectively support the projected growth in air traffic.

As you will read in this report, through partnerships with the aviation community, we have developed a clear path to NextGen. The aim is to create a system that integrates technology at all levels and ensures that the users of the system are also system enablers.

The ATO has established management and accountability processes enabling it to operate in the proactive manner necessary to transform the system. By working in collaboration with stakeholders, we hope to create a more direct relationship between revenue collected and services received, thereby providing the Federal Aviation Administration with a stable revenue stream to make the NAS safer, more efficient and more responsive to changes in aviation.

The stakes are high. Aviation is the lifeblood of the economy. Conservatively, it accounts for 5.5 percent of U.S. gross domestic product, about 10 million American jobs and \$343 billion each year in earnings. As you read this report, you will find that the ATO is more dedicated than ever to ensuring that the aviation system stays vibrant in the years ahead.

Sincerely,

A handwritten signature in black ink that reads "Marion C. Blakey". The signature is written in a cursive, flowing style.

Marion C. Blakey
FAA Administrator

“The ATO is positioning itself to meet our future challenges. By institutionalizing our business practices, we will sustain and improve the performance of what is now the world’s best air traffic services provider.”

- Robert A. Sturgell

Letter from the Acting Chief Operating Officer



FAA Deputy Administrator and acting ATO Chief Operating Officer Robert A. Sturgell.

Photo: Jeff Bruzdinski, FAA

The Air Traffic Organization (ATO) is proud of its performance in fiscal year 2006. We achieved all of our safety and capacity goals and demonstrated careful stewardship of taxpayers' money by delivering programs on time and within budget. As a performance-based organization, the ATO moved forward with its mission to deliver the safest and most efficient air traffic services to all its customers. We set challenging targets and exceeded them. In fiscal year 2006, we hit the operational error rate target for the first time since it was established, a major achievement, and met our goal of reducing runway incursions.

The ATO continues to provide value in its services. We are managing our capital programs better than ever. Of our 31 major acquisition programs, 100 percent met budget goals and 97 percent met their schedule goals in fiscal year 2006. We consolidated business and administrative services from nine regions into three ATO service areas, which will reduce overhead costs by \$360 million during the next 10 years. Such savings and prudent financial controls allowed us to invest in the technologies and programs needed to increase the safety and efficiency of the National Airspace System (NAS).

We implemented the new Airspace Flow Program (AFP) to reduce delays on the most severe weather days. The Enhanced Backup Surveillance System (EBUS) and the User Request Evaluation Tool (URET) were fully rolled out in the en route environment. Advanced Technology and Oceanic Procedures (ATOP) implementation boosted efficiency in the complex Atlantic and Pacific Ocean routes. Airport Surface Detection Equipment-Model X (ASDE-X) brought additional safety enhancements to runways. New performance-based navigation came online, bringing huge potential for capacity improvements. Such technologies are essential to deal with the projected increase in traffic during the next two decades.

Fiscal year 2006 saw pre-2001 traffic levels returning to many of the nation's busiest airports. To safely handle continued traffic increases and future challenges, we are investing in the Next Generation Air Transportation System (NextGen). Progress toward this goal requires a stable and predictable funding stream.

Our current and future success is all about our people. Their professional commitment to safety and performance is critical to the ATO meeting its goals. In fiscal year 2006, we hired 1,116 new controllers as part of our comprehensive staffing plan, which ensures that the right numbers of controllers are in the right place at the right time to handle evolving traffic challenges. We also hired 396 maintenance technicians. Staying on top of our staffing requirements remains a top priority.

The ATO is positioning itself to meet our future challenges. By institutionalizing our business practices, we will sustain and improve the performance of what is now the world's best air traffic services provider.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert A. Sturgell'.

Robert A. Sturgell
FAA Deputy Administrator and acting ATO Chief Operating Officer

Performance



Performance: Our Bottom Line | When the system performs, people get to their destinations and the economy flourishes. This is why we come to work each day. Moving America safely; it's what we do.

Air traffic controllers clear up to 7,800 aircraft to take off and land per hour.

Photo: Jon Ross, FAA

Performance: *Our Bottom Line*

The Air Traffic Organization (ATO) developed a rigorous set of measurable goals and worked hard to meet them. Our stakeholders have noticed the results. In May 2006, the Government Accountability Office (GAO) published a report on the Status of the [ATO's] Current Modernization Program and Planning for the Next Generation System (GAO-06-738T). The GAO noted the steps the ATO has taken to control costs and develop its cost accounting system. The GAO also found that the ATO had streamlined management, revised its acquisition processes and met its major acquisition performance goals.

"To improve its management of ATC modernization, ATO has taken steps toward having a more results-oriented culture; a flatter, more accountable management structure; and more businesslike management and acquisition processes ... In summary, ATO has made a number of promising moves toward becoming a results-oriented organization and we view ATO's efforts to improve its culture, management and acquisitions process as positive steps."

— Government Accountability Office, May 2006

Since its inception in 2004, the ATO has significantly improved its domestic and oceanic services by launching new technology and procedures. We reduced overhead staffing while continuing to hire safety staff such as controllers and technicians. We developed the first comprehensive controller workforce plan and centralized the hiring and training of this critical workforce. We staged an incredible response in the aftermath of one of the most devastating hurricane seasons on record. We reduced our overhead, restructuring our presence in the nine regional offices to just three service centers.

Why is our performance so important? The ATO is the largest provider of air traffic services in the world and accounts for 77 percent of the Federal Aviation Administration workforce. To reach our goals, we shifted from managing our budget to managing our costs and in doing so, created a focus on service.

The ATO operates with a strategic focus on metrics. Those metrics are incorporated into all of our plans and outlined in the FAA's Flight Plan. The ATO met all of its Strategic Management Plan goals for fiscal year 2006, achieving success with financial and operational metrics. We are setting challenging targets and meeting them. As an organization, the ATO was the first recipient of the Administrator's Flight Plan Award for reaching and improving the FAA's operational error performance target.



More than 6,000 maintenance technicians work hard to ensure air traffic equipment is always performing. Here, Airway Transportation Systems Specialist Tony Gispert secures a new communications antenna.

Photo: Jon Ross, FAA

In September 2006, we implemented a new air traffic controller contract. The contract allows us to manage our workforce in a more efficient, more affordable and more accountable way—responding to the needs of the National Airspace System (NAS) and rewarding performance. We have an updated controller workforce plan that provides a comprehensive 10-year strategy to ensure that the FAA has the right number of controllers in place at the right time to address anticipated controller retirements.

Through the Operational Evolution Partnership (OEP), we are investing in technologies that support the Next Generation Air Transportation System (NextGen), which will improve safety, capacity and efficiency. Our investments provide immediate benefits to our user community—saving the aviation industry fuel costs, reducing noise and emissions, and providing an even safer operational environment.

We continue to develop, test and implement new programs for every stage of air traffic control, including:

- » Procedures to improve airport operations (takeoffs and landings), such as Area Navigation (RNAV) and Required Navigation Performance (RNP).
- » Methods to reduce runway incursions and operational errors, including Airport Surface Detection Equipment—Model X (ASDE-X) and Runway Status Lights (RWSL).
- » Programs that improve the use of en route airspace, including Automatic Dependent Surveillance—Broadcast (ADS-B) and En Route Automation Modernization (ERAM).
- » An efficient system of information sharing, including System-Wide Information Management (SWIM) and FAA Telecommunications Infrastructure (FTI).

This report highlights the continued strides in the performance of the air traffic system and examines how we are proactively preparing for 2016 and beyond.

Air traffic controllers in the terminal environment keep vigilant watch over airport surface movements, takeoffs and landings. Controllers Howard Daniel and Angela Vega at Miami International Airport.
Photo: Jon Ross, FAA



Safe



The Air Defense Identification Zone (ADIZ): Secure | An Air Defense Identification Zone around Washington, D.C., was established in 2001 to prevent unauthorized aircraft from entering the airspace over the nation's capital.

A general aviation pilot navigates around the Washington, D.C., ADIZ. Photo: Katherine Frey
© Washington Post, reprinted with permission.

Performance: *Our Bottom Line*

The United States has the safest air traffic system in the world. With more than 7,000 takeoffs and landings per hour, the men and women of the Air Traffic Organization (ATO) safely guide about 50,000 aircraft through the National Airspace System (NAS) every day and moving more than 660 million passengers and 37 billion cargo revenue ton miles of freight each year.

Our employees develop, test and deploy a variety of programs, systems and procedures to continually enhance aviation safety. We constantly strive to improve the safety and efficiency of aircraft spacing, takeoff and landing procedures, environmental effects and the impact of weather on the air transportation system. This emphasis on safety permeates the organization at every level from the technician in the field to the vice president on the executive council.

MEETING TARGETS

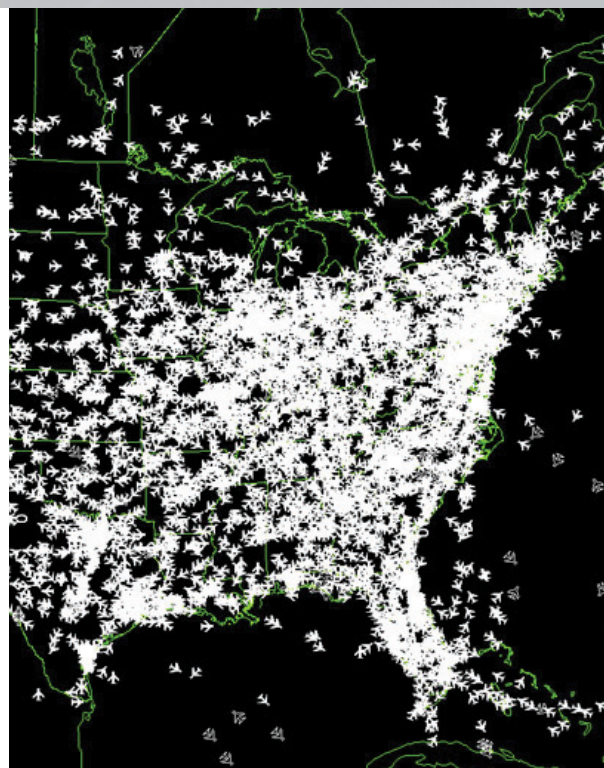
We met our safety targets to reduce operational errors and runway incursions in fiscal year 2006. The ATO has made the reduction of serious runway incursions one of its top priorities. Implementing runway safety management strategies, the ATO achieved its safety performance limit for runway incursions for the fifth consecutive year. The goal was to reduce the rate of Category A and B (the most serious) runway incursions to 0.551 per million operations, or no more than 35 during the year. In fiscal year 2006, there were only 31 Category A and B runway incursions.

The ATO also achieved a safety milestone with the reduction of Category A and B operational errors—defined as the failure to maintain the proper separation of aircraft. The performance limit was to reduce the rate to no more than 4.27 per million activities, or no more than 654 for the year. We ended fiscal year 2006 with a rate of 4.10 per million activities, equaling 627 errors. The performance of our controllers and supervisors, as well as our airspace redesign efforts, which resulted in less complicated airspace and more direct flight trajectories in many areas, are major reasons for this drop in operational errors.

REDUCING RISK

In our effort to improve performance rates, we developed and implemented a number of programs that reduce runway incursions and operational errors. They include the following:

- » Airport Surveillance Equipment-Model X (ASDE-X), a traffic management system for the airport surface, provides seamless coverage and aircraft identification to air traffic controllers,



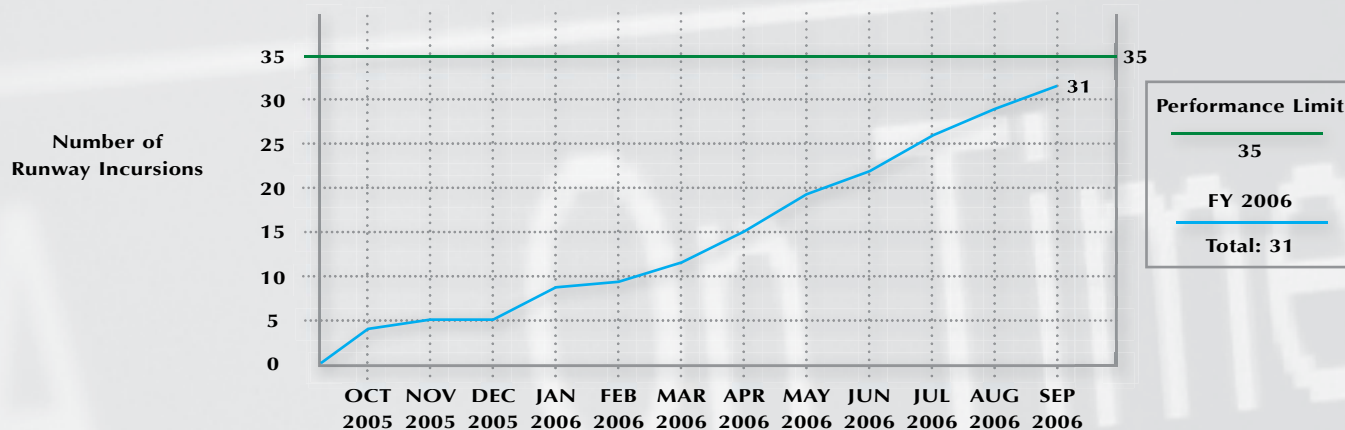
This situation display shows the aircraft in the air over the eastern half of the United States at a particular moment. Air traffic controllers safely guide the more than 7,000 aircraft that are aloft in the U.S. during peak hours.

Photo: FAA

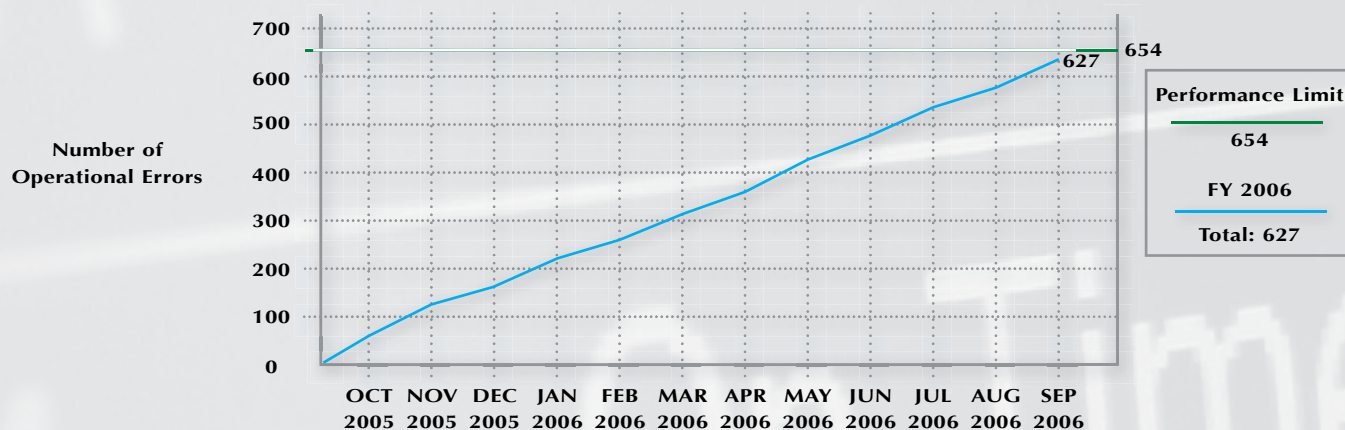
improving airport safety in all weather conditions. ASDE-X systems achieved operational readiness at the Seattle, St. Louis and Atlanta airports in fiscal 2006.

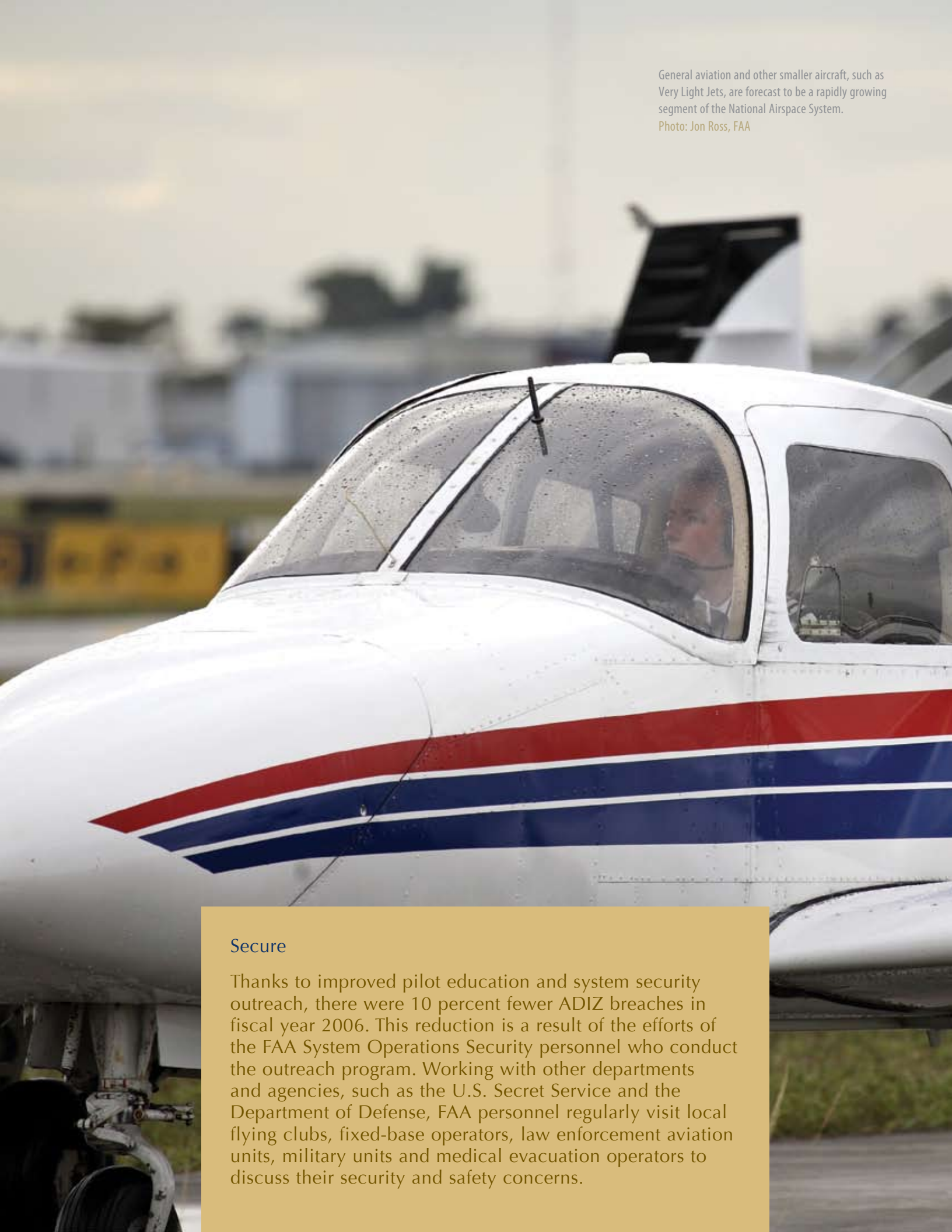
- » The Runway Safety Lights (RWSL) lighting system activates automatically when sensors indicate that an aircraft is on or about to approach the runway and another aircraft or vehicle is approaching on the taxiway. RWSL was put in operation at the Dallas/Ft. Worth and San Diego airports in fiscal 2006. A study of further deployment of the program is currently under way.
- » The Facility Safety Assessment System (FSAS), a Web-based data collection and distribution system, analyzes information about runway incursions and operational errors, allowing the FAA to identify precursors to these serious incidents. The benefits of FSAS allow facilities to streamline the reporting process and share mitigation plans across the NAS. It has increased data flow and trend recognitions to identify focus areas for further improvement. In fiscal year 2006, we completed training on this system.
- » The Traffic Analysis and Review Program (TARP) provides automated notification of potential losses of separation that can result in operational errors. The data collected by TARP will allow air traffic managers to better analyze the factors that lead to operational errors, reducing future occurrences and support more effective and efficient air traffic controller training. Software development for the TARP initial baseline was completed during fiscal year 2006.
- » Two key technologies that allow safer and more accurate lower-altitude air routes—Automatic Dependent Surveillance-Broadcast (ADS-B) and the Wide Area Augmentation System (WAAS)—helped reduce the general aviation accident rate in Alaska's Yukon-Kuskokwim Delta by 47 percent.

SAFETY PERFORMANCE: A & B RUNWAY INCURSIONS



SAFETY PERFORMANCE: A & B OPERATIONAL ERRORS





General aviation and other smaller aircraft, such as Very Light Jets, are forecast to be a rapidly growing segment of the National Airspace System.

Photo: Jon Ross, FAA

Secure

Thanks to improved pilot education and system security outreach, there were 10 percent fewer ADIZ breaches in fiscal year 2006. This reduction is a result of the efforts of the FAA System Operations Security personnel who conduct the outreach program. Working with other departments and agencies, such as the U.S. Secret Service and the Department of Defense, FAA personnel regularly visit local flying clubs, fixed-base operators, law enforcement aviation units, military units and medical evacuation operators to discuss their security and safety concerns.

Efficient



Developing NextGen Technologies | ATO staff at the William J. Hughes Technical Center in Atlantic City, N.J., work on an array of research projects to continuously improve safety and efficiency in the National Airspace System.

Congressional staffer Jana Denning gets a first-hand demonstration of FAA's fire safety research at the William J. Hughes Technical Center. Photo: Ernie Pappas, FAA

Performance: *Our Bottom Line*

One of the most important steps in controlling costs is to ensure that the Air Traffic Organization's (ATO) capital programs are effectively managed. The ATO achieved this goal in 2006 with 100 percent of capital programs within budget and 97 percent of capital programs on schedule.

MAJOR CAPITAL PROGRAMS

The major capital programs under development in the ATO are on track. These programs provide navigation, surveillance, computer processing capabilities, tools for air traffic controllers, telecommunications infrastructure and weather information to make the National Airspace System (NAS) run smoother.

Wide Area Augmentation System (WAAS) is a precise navigation system that provides the additional accuracy, availability, continuity and integrity necessary to enable pilots to rely on the Global Positioning System (GPS) for all phases of flight. It provides the service for considerably less cost than using conventional land-based navigation aids. The first segment of WAAS includes guidance for approaches to runways when the cloud layer is no less than 250 feet above the surface of the runway. In 2006, the FAA completed a technical analysis that showed that WAAS Localizer Performance with Vertical guidance is capable of providing guidance for aircraft to descend to 200 feet above the runway at a significant number of airports in the continental United States, thus providing more precise approach capability.

The Terminal Automation Modernization and Replacement (TAMR) program is a capital program to modernize the air traffic control systems that controllers use at, or near, major airports. TAMR Phase I replaces the radar processing and display systems at 47 Terminal Radar Approach Control facilities (TRACONs). By the end of fiscal year 2006, 43 terminal sites were using the new systems to control air traffic.

En Route Automation Modernization (ERAM) upgrades the en route air traffic control system used by air traffic controllers in the 20 high-altitude en route centers across the United States. In 2006, this program office completed the implementation of the En Route Backup Surveillance system (EBUS) at all 20 en route centers—ahead of schedule and \$2 million under budget. The EBUS system completes the first step of ERAM and is the foundation for meeting traffic demands in 2015 and beyond. The second step, En Route Information Display System (ERIDS) deployment, is under way and the system is operational at five of the 20



The Advanced Technology and Oceanic Procedures (ATOP) program is an integrated air traffic control system for the U.S.-controlled oceanic airspace. In fiscal year 2006, ATOP was in place at all three oceanic sites: the Oakland, Calif., New York, N.Y., and Anchorage, Alaska, Air Route Traffic Control Centers. Photo: FAA

en route centers. The baseline software development for the main aspect of ERAM, the replacement of the Host Computer System (HCS), was completed in December 2005.

Airport Surveillance Radar-Model 11 (ASR-11) is an integrated primary and secondary radar system being deployed at terminal air traffic control sites. It interfaces with legacy and digital automation systems, such as the Standard Terminal Automation Replacement System (STARS) and provides a six-level National Weather Service-calibrated weather capability that will result in significant improvements in situational awareness for controllers and pilots. The ASR-11 program is now in full-deployment mode. ASR-11 radars achieved initial operating capability at 10 sites in 2006.

Airport Surface Detection Equipment-Model X (ASDE-X) is a surveillance system using radar and satellite technology that allows air traffic controllers to track surface movement of aircraft and vehicles. It was developed to reduce critical Category A and B runway incursions. By the end of fiscal year 2006, there were eight commissioned ASDE-X systems. Two additional systems will begin operations in fiscal year 2007, 17 systems are in various implementation stages and the FAA is expediting the deployment of ASDE-X to Chicago O'Hare International Airport. Seven more systems will begin the implementation process in fiscal year 2007.

The Advanced Technology and Oceanic Procedures (ATOP) program is an integrated air traffic control system for the U.S.-controlled oceanic airspace. In fiscal year 2006, ATOP was in place at all three oceanic sites: the Oakland, Calif., New York, N.Y., and Anchorage, Alaska, air route traffic control centers.

The En Route Communications Gateway (ECG) program provides the central point at which mission-critical flight and surveillance data enter and exit FAA's high-altitude air traffic control centers. The ECG program is now fully operational at all 20 air route traffic control centers and was completed on time and under budget.

The FAA Telecommunications Infrastructure (FTI) program passed two major milestones in 2006. Services were fully moved from the old satellite system to the new one and the old system's mission support services, such as e-mail and payroll, were migrated to the new system. The transition from the Agency Data Telecommunications Network (ADTN) involved 800 sites—from small radar stations to the FAA's headquarters—and was finished a month early. While the program did miss a major milestone in 2006, to date, installations are finished at half of the 4,000 locations and 45 percent of the 9,600 services are completed.

The Integrated Terminal Weather System (ITWS) is an air traffic control tool that employs technology to provide more efficient air traffic flow in periods of adverse weather. By providing traffic managers with this accurate, immediately useable weather information, ITWS helps increase safety and capacity, improve efficiency and reduce weather delays for airlines and the traveling public. In 2006, the ITWS program team completed a terminal convective weather forecast capability enhancement that increases weather forecast information from 20 to 60 minutes. The program is ahead of its deployment schedule and will provide coverage for 35 airports.

The User Request Evaluation Tool (URET) was implemented at all 20 air route traffic control centers. The conflict probe and trial planning capabilities of URET allow controllers to test and evaluate alternate flight paths to improve the flow of aircraft through available airspace. Planning not only can be conducted within a controller's sector, but also can be projected into adjacent sectors and other centers. In fiscal year 2006, URET saved airline customers \$179.3 million in fuel costs.

IMPROVED EFFICIENCY

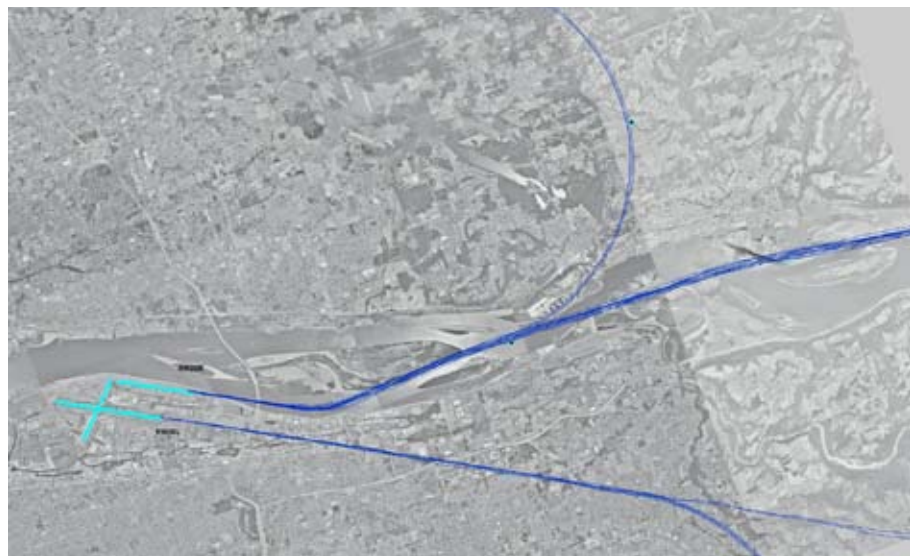
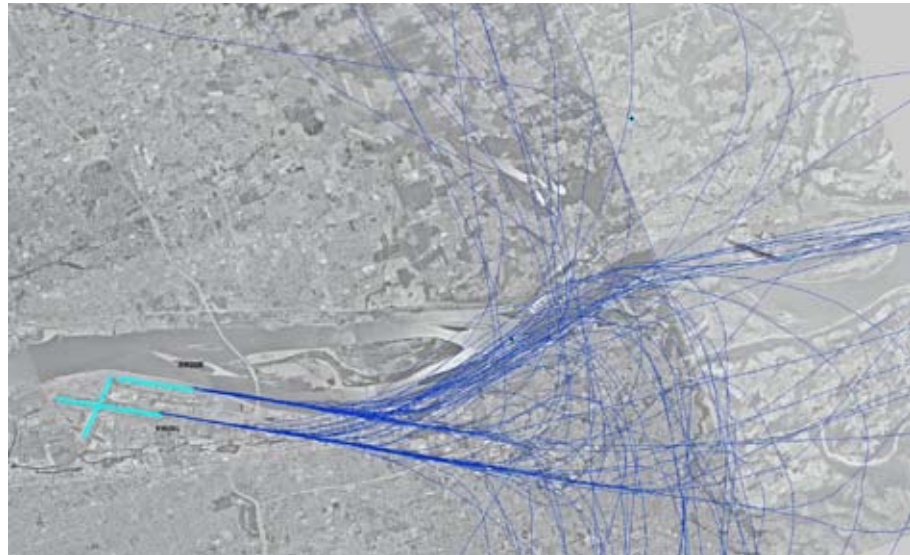
In addition to these major capital programs, the ATO team developed a number of new programs during fiscal year 2006. These programs utilize satellite and Web-based technology to safely increase capacity and traffic flow management and improve communication.

The Airspace Flow Program (AFP), a traffic management program used to meter traffic streams when thunderstorms or other events impede the NAS, was launched in June 2006. Instead of using ground delay programs, the program computes takeoff delay for flights routed through specific flow-restricted sections of airspace, saving airlines about \$3.5 million and 85,000 minutes in delays per AFP issued.

In fiscal year 2006, the FAA approved funding for the implementation of Automatic Dependent Surveillance Broadcast (ADS-B) at eight sites. The ADS-B system is a crucial component of Next Generation Air Transportation System (NextGen). It provides surveillance and improved situational awareness simultaneously to pilots and air traffic controllers. ADS-B is designed to improve the safety, capacity and efficiency of the NAS, while providing a flexible, expandable platform to accommodate future air traffic growth.

We published 28 Required Navigation Performance (RNP) Special Aircraft and Aircrew Authorization Required (SAAAR) approaches this year. RNP approaches provide for a highly accurate and flexibly designed vertically guided approach path (without requiring additional ground equipment) with onboard monitoring and alerting capability of navigation performance. These approaches provide improved safety, increased access in challenging terrain and weather, and operational efficiency and environmental benefits.

As part of our implementation effort for Area Navigation (RNAV), we published 53 RNAV arrival and departure procedures, resulting in more than \$40 million in annual reduced delay and increased capacity benefits. We published 33 RNAV routes that give users the ability to fly more direct flight paths,



Required Navigational Performance provides more efficient approaches, increasing capacity at U.S. airports. Approach paths used before RNP (top) and after at Portland International Airport.

Graphic: FAA

reducing flight distances and offering fuel savings to users. RNAV uses onboard technology to give pilots precise flight paths—even in bad weather.

INCREASED CAPACITY

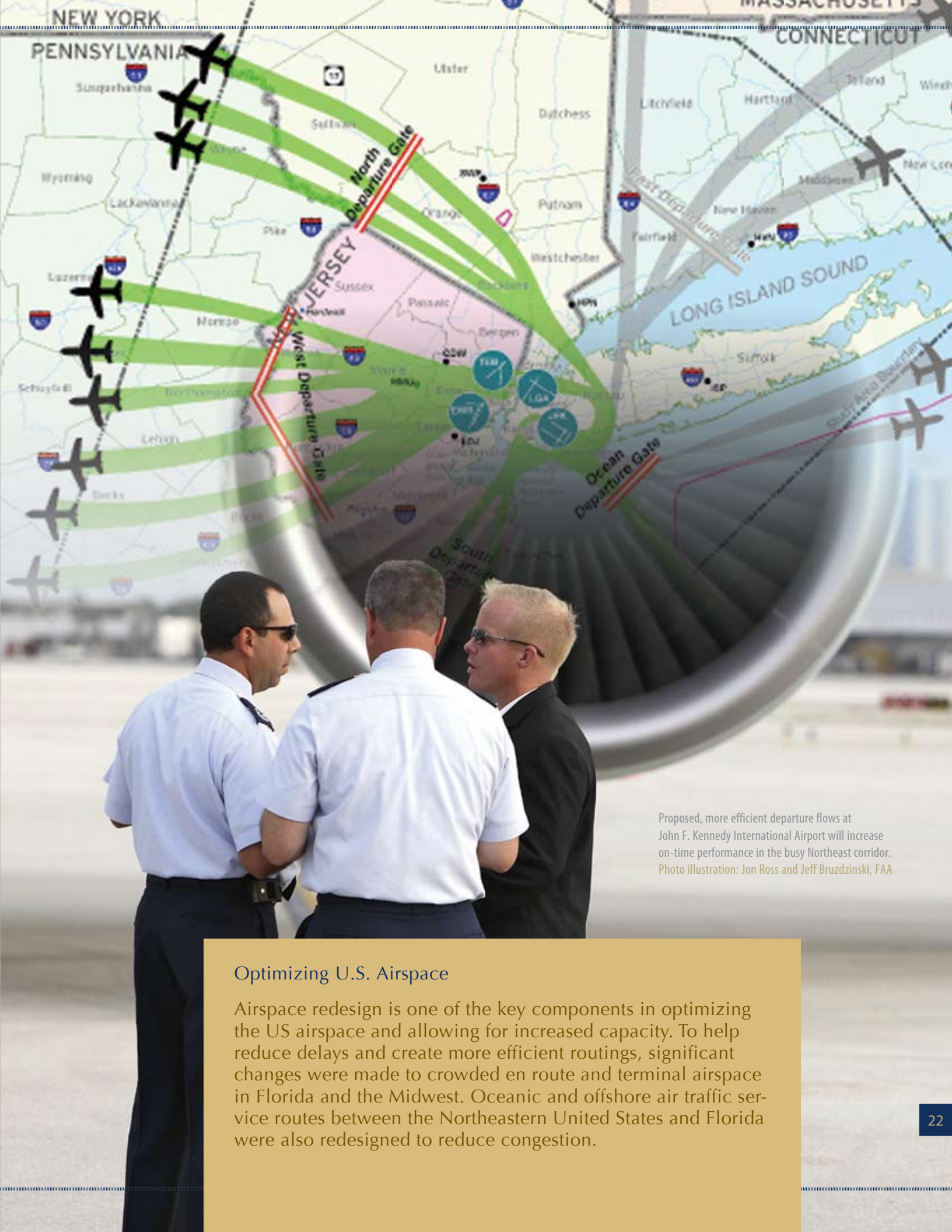
Airspace redesign is one of the key components to optimize U.S. airspace and increase capacity. To reduce delays and create more efficient routings, significant changes were made to crowded en route and terminal airspace in Florida and the Midwest. Oceanic and offshore air traffic service routes between the northeastern United States and Florida were also redesigned to reduce congestion.

ATO worked on reducing the separation of aircraft in the West Atlantic Route System and the surrounding U.S.-controlled oceanic airspace. Taking advantage of improved cockpit communications, navigation and surveillance and air traffic management capabilities, the new separation standards will accommodate significant airspace redesign, adding more routes that are spaced closer together. The routes will be harmonized with other routes from the Caribbean region to increase oceanic airspace efficiency by giving operators the ability to fly closer to their ideal fuel and time trajectories.

New York/New Jersey and Philadelphia Area Airspace Redesign

The New York/New Jersey and Philadelphia air corridor is one of the most heavily traveled in the nation. The FAA is redesigning that airspace to accommodate increasing air traffic and mitigate delays in that region, while maintaining the highest level of safety. This is a collaborative process with input from the public, industry and government. The adjusted traffic flows will accommodate new technologies and reduce delays. The redesigned traffic flows will improve user access, maintain airport throughput, expedite arrivals and departures, give controllers the flexibility to offer preferred routes and balance controller workload.

Noise impacts are almost inevitable when flight paths are moved at low altitudes, but these impacts can be redistributed to reduce exposure to residential areas. The FAA has identified several mitigation strategies to address noise impacts, including concentrating departure traffic away from noise-sensitive areas, flying over the water, adapting continuous decent approaches or optimized vertical profiles for arrivals, developing area navigation overlays to focus ground tracks, raising altitudes for level flight segments, increasing the angle of descent for arrivals and adjusting ground tracks over nonresidential areas. Although these strategies may help mitigate noise impacts, they may also reduce the operational benefits that optimal traffic flow adjustments would offer. Specific mitigation strategies will be included in the Final Environmental Impact Study planned for 2007.



Proposed, more efficient departure flows at John F. Kennedy International Airport will increase on-time performance in the busy Northeast corridor. Photo illustration: Jon Ross and Jeff Bruzdinski, FAA

Optimizing U.S. Airspace

Airspace redesign is one of the key components in optimizing the US airspace and allowing for increased capacity. To help reduce delays and create more efficient routings, significant changes were made to crowded en route and terminal airspace in Florida and the Midwest. Oceanic and offshore air traffic service routes between the Northeastern United States and Florida were also redesigned to reduce congestion.

Professional



Air Traffic Control: A Team Sport | Air traffic control supervisors and controllers serve a vital function to ensure flight safety. By working together, they decreased the overall number of operational errors by 10.35 percent and the most serious (Category A and B) operational errors by 7.8 percent.

Air traffic controllers and supervisors collaborate to ensure the safe separation of aircraft in terminal and en route facilities across the U.S. Photo: Jon Ross, FAA

Performance: *Our Bottom Line*

The Air Traffic Organization (ATO) is composed of 35,000 professional employees committed to providing safe and efficient air traffic control services. Many of these employees, including more than 14,000 air traffic controllers, 5,000 air traffic supervisors and air traffic managers, 1,100 engineers and 6,100 maintenance technicians, directly serve our customers.

Some 8,000 additional employees work in a wide variety of professions to sustain the smooth operations of the ATO every day of the year. These employees research, plan and build air traffic control equipment and programs; manage payroll and benefits programs; provide procurement service for both the ATO and the FAA at large; maintain productive relationships with the aviation industry and the general public; and ensure that the environment and ATO employees are protected. Without the professional performance of the men and women of the ATO, the \$207 billion per year U.S. aviation industry would not function.

HIRING AND TRAINING AIR TRAFFIC CONTROLLERS

FAA air traffic controllers safely guide about 50,000 aircraft through the National Airspace System (NAS) each day. In fiscal year 2006, we hired and trained 1,116 new controllers. Our comprehensive 10-year Controller Workforce Plan calls for hiring more than 1,300 new air traffic controllers in fiscal year 2007 from the pool of thousands of eligible applicants awaiting offers. Thanks to a centralized hiring process and improved training, the FAA is confident that the new controller hires will be able to meet the needs of the future.

The Department of Transportation's Office of the Inspector General audits the FAA's controller workforce plan. Although we have more work to accomplish, the February 9, 2007, report, "FAA Continues to Make Progress in Implementing its Controller Workforce Plan, but Further Efforts are Needed in Several Key Areas," confirms that the FAA is indeed making progress in implementing a comprehensive staffing plan. The inspector general found that the "FAA has made significant improvements by centralizing its hiring process and has made progress in reducing the time and costs to train new controllers, primarily through greater use of simulator training at the FAA Training Academy and implementation of a new national database to track on-the-job training statistics."



Air traffic controller Susan Geith at the Miami TRACON.
Photo: Jon Ross, FAA

CREATING A CULTURE OF ACCOUNTABILITY

ATO service units have the shared objective to reduce our cost of operations. Each service unit has a specific measure to track its performance in reducing costs. To better equip managers with a framework for improved cost management accountability, ATO Finance conducted Financial Preparedness Outreach sessions across the country during fiscal year 2006. These sessions provided managers with information relating to financial systems and tools, Budget Execution Tool reporting and performance measurement and assessment so that they can become better stewards of the public funds entrusted to the ATO by our stakeholders.

The goals we set as a performance-based organization give all our employees a common objective and create a motivation for teamwork. Furthermore, because the pay structure of the ATO is tied to performance, the entire workforce is focused on achieving those goals. The ATO Awards Program recognizes and acknowledges the extraordinary work and professionalism of ATO employees. This program allows for empowerment at the lowest possible management level and awards are granted based on measurable results tied to the Flight Plan, Business Plan and the Strategic Management Process goals.

CONTINUING INTERNATIONAL ACHIEVEMENTS


The ATO continues its global leadership role in promoting safe and efficient air traffic services around the world and supports collaborative international initiatives to share our new technologies with other countries.

In May 2006, we participated in the performance-based navigation seminar in Beijing, China. Fiscal year 2006 also saw the implementation of the U.S.-China Executive Management Development Program. This five-month leadership development effort provided training in the United States to 35 future leaders from the General Administration of Civil Aviation of China and its Air Traffic Management Bureau.

The ATO is assisting with the modernization of India's air traffic management system. Like China, India is experiencing a rapid growth in its aviation sector.

The ATO formed a new air traffic working group with Russian, Canadian, Icelandic and U.S. air traffic service providers and airspace operators. This group will work to improve cross-border coordination of air traffic, enhance traffic flow management and harmonize procedures for cross-polar and trans-eastern air traffic operations. This work will support current increases and further expected growth in air traffic between North America and Asia. Workgroup harmonization efforts were expanded to include China and Japan.

We completed the implementation of automated cross-border flight data interfaces between the United States and Mexico and the United States and Canada. This interface allows automated cross-border flight data exchange in standard International Civil Aviation Organization (ICAO) –compliant messaging format, thus harmonizing technology standards, removing manual coordination and increasing air traffic safety and efficiency.



Dan Smiley, FAA Air Traffic Control System Command Center manager, hosts a group from the General Administration of Civil Aviation of China on a tour of the Command Center's control room. Photo: Thomas Clarke, FAA

Global Leadership

The ATO continues its global leadership role in promoting safe and efficient air traffic services around the world and is supporting collaborative international initiatives to share our new technologies with other countries.

Focused



Focused on Performance | By centralizing administrative and business support services into three areas, the ATO was able to reduce overhead costs. The new service centers are seen as a model for the way the entire ATO can provide more efficient staff and administrative services.

ATO managers focus on safety and performance enhancements to increase the value of air traffic services. Photo: Jon Ross, FAA

Performance: *Our Bottom Line*

The Air Traffic Organization (ATO) focuses on increasing the value of its services. To do this, we work to improve the product we provide—that is, air traffic services—while reducing the cost of providing this service. As such, we focus on reducing overhead costs while meeting our safety targets with performance as our bottom line.

The ATO manages assets valued at more than \$30 billion. These assets include 500 airport towers, 21 air route traffic control centers and 45,000 pieces of equipment.

A focus on financial metrics is essential to the management of these assets. Our results show that we are managing our finances, hitting our financial goals and supporting our budget requests with credible performance data. This is critical if we expect taxpayers and aviation customers to provide the funds needed to run our operation and invest in the new technologies that will ensure its continued high performance. After five consecutive clean audits, the FAA received a qualified opinion on its fiscal year 2006 financial statements. The qualification was limited to the accuracy of the construction in process (CIP) account balance. The FAA has developed a plan to address this qualification during fiscal year 2007.

The ATO invests more than \$2 billion in facilities, equipment, programs and technologies every year. The ATO's capital investments and budget priorities are managed through a balanced scorecard.

In 2005, the senior vice president for finance established a Capital Investment Team to review the major accounts. The members of this team evaluate the business case for every capital project as the projects are assessed. Since April 2004, more than 139 capital projects have been reviewed, with five major projects restructured and four projects terminated. In fiscal year 2006, 49 projects were reviewed for cost, schedule, performance and benefits.

PERFORMANCE MEASUREMENT

The ATO operates through a Strategic Management Process with annual performance targets that are measured and tracked throughout. We approach financial operations from a cost-management perspective rather than a budget-management perspective, placing our focus on service outcomes.



Eugene D. Juba, ATO senior vice president for Finance Services, emphasizes the importance of financial metrics.

Photo: Jon Ross, FAA

In fiscal year 2006, the ATO implemented a number of cost-saving measures, including the following:

- » Reducing overhead costs, including an 8 percent reduction of nonsafety staff.
- » Bringing new controller salaries in line to more closely reflect the salary structure of the FAA's core compensation plan for all FAA employees. Competitive salaries for new hires were established and existing controller salaries were preserved. Five-year savings are expected to be \$1.9 billion.
- » Consolidating information technology (IT) services, reducing costs while improving predictability, availability and security of IT services.
- » Restructuring the regional ATO offices into a shared services concept which will save \$360 million over the next 10 years. By June 2006, three ATO service centers had assumed responsibility for all administrative and staff support functions in the field.
- » Implementing energy conservation measures that will save \$513 million over the next 10 years. ATO began to save energy in air traffic facilities by introducing distributed generation (solar, wind and other) power and converting to efficient building systems and controls. So far we have saved \$12.5 million by installing 15,000 light-emitting diode-based obstruction lights.
- » Removing 227 unused navigation facilities from service for an operations and maintenance cost avoidance of \$1.5 million.

RESULTS


In May 2006, the Government Accountability Office (GAO) report on the Status of the Current Modernization Program and Planning for the Next Generation System (GAO-06-738T) noted the steps the FAA has taken to control costs and develop our cost accounting system.

Our unit costs and performance measures for fiscal year 2006 are shown in the table below.

PERFORMANCE MEASURE	FY05	FY06
ATO Total Unit Cost (total obligations/IFR flight)	\$347	\$378
ATO Unit Labor Cost (labor obligations/IFR flight)	\$276	\$280
En Route labor cost/flight hour	\$59	\$60
Terminal labor cost/operation	\$18	\$19
ATO Productivity (IFR flights per ATO Employee)	525	541
Overhead Labor Rate	18%	19%
Direct/Indirect Staffing Ratio	9.66*	10.05

Source: Air Traffic Organization Strategic Management Process – Finance Metrics FY06 Results (Gold Report FY06), DELPHI.

Note: * = revised. IFR = Instrument Flight Rules.



The new air traffic control tower at the world's busiest airport, Atlanta's Hartsfield-Jackson International, is the tallest such facility in the U.S.
Photo: Hartsfield-Jackson International Airport

Atlanta Tower

Hartsfield-Jackson International Atlanta Airport commissioned the continent's tallest airport traffic control tower. A collaborative team of about 50 air traffic and technical operations specialists achieved cutover to air traffic operations at the new tower at 3:10 a.m. on May 6, 2006.

At 398 feet, the new tower is 165 feet higher than the one it replaces and provides much more space in the cab for the air traffic controllers. The added height gives controllers a clear view of the entire airport, which was required before Atlanta's new 9,000-foot runway could be used.

The tower is equipped with an array of technologically advanced systems for communication, navigation, surveillance, visual aids and automation. It is the first tower with a dual-sensor Airport Surface Detection Equipment-Model X (ASDE-X) system, which is designed to provide controllers with seamless surveillance and aircraft identification throughout the airport's surface in any weather.

Innovative



Researching NextGen | The FAA's William J. Hughes Technical Center flight program supports many advanced aircraft navigation, surveillance and communications initiatives that are making flying safer and more efficient, including Automatic Dependent Surveillance-Broadcast (ADS-B), Global Positioning System (GPS) with both the Wide Area Augmentation System (WAAS) and the Local Area Augmentation System (LAAS), the Airport Movement Area Safety System (AMASS) and aircraft security.

The flight deck of the Atlantic City, N.J., Technical Center's new flight test aircraft, N47. The aircraft is equipped with the Honeywell PRIMUS 2000XP Integrated Avionics Flight Control System (IAFCS).
Photo: Ernie Pappas, FAA

Performance: *Our Bottom Line*

The Joint Planning and Development Office (JPDO) is developing an innovative plan to transform today's air traffic system. The Air Traffic Organization (ATO) will implement that plan, with the help of our scientists, engineers, human factors specialists, program managers and computer analysts. ATO staff at the FAA's William J. Hughes Technical Center in New Jersey will lead the testing and prototype development of the actual systems that will make the JPDO's vision a reality.

THE PROBLEM

The existing air traffic system is reaching the limits of its potential for growth and it is not scalable to accommodate future demand. In other words, we cannot simply build twice as many facilities and hire twice as many employees to handle twice the traffic. Quick fixes using the existing system, such as adding more radars and air traffic controllers, will not produce the required additional capacity. With demand for use of the nation's airspace steadily rising, it is imperative that the ATO look for a sustainable solution—that is, an integrated system—to manage air traffic.

Research conducted in 2006 by the ATO and the MITRE Corporation's Center for Advanced Aviation System Development (CAASD) has shown that, using our current approach, air traffic controllers will not be able to handle traffic at 25 percent above today's levels. Traffic may increase this much by 2016. Although our long-term goal is to use the Next Generation Air Transportation System (NextGen), we need interim solutions, as NextGen will not be completed until 2025. Capabilities will need to be designed to increase air traffic controller productivity by automating many routine tasks now handled manually.

THE SOLUTION

A new approach is needed. The ATO is working in tandem with the JPDO to develop NextGen, which will transform the way in which the ATO manages air traffic. The stepping stones to NextGen are already being put in place, including exciting new technologies such as Area Navigation (RNAV), Required Navigation Performance (RNP), Automatic Dependent Surveillance Broadcast (ADS-B) and System-Wide Information Management (SWIM). These technologies offer improved services and the ability to handle increased traffic. It is critical that these stepping stones are developed concurrently so that they work together as an integrated system.

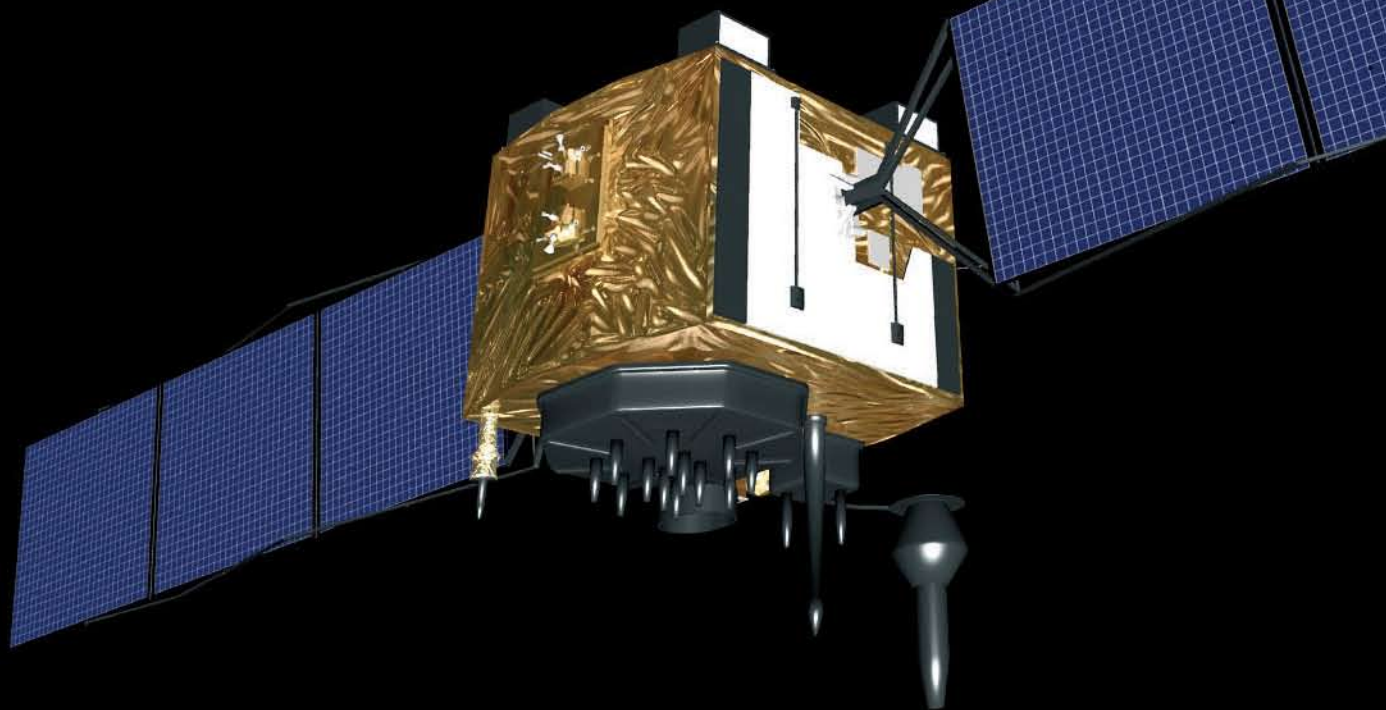


Juan Reyes and John Rodriguez (right), ATO transportation systems specialists. Photo: Jon Ross, FAA

New technologies on the flight deck and new automation systems at air traffic control facilities will enable pilots and controllers to work together to respond dynamically to an aviation environment containing many more aircraft than the current system can handle. In addition, new surveillance and navigation technologies will allow the ATO to reduce the number of ground-based facilities and reduce maintenance costs. At the same time, these new technologies will make ATO employees more productive.

The ATO is developing the enterprise architecture that lays out the path to NextGen and is forging an Operational Evolution Partnership (OEP) with its customers and stakeholders to move quickly to achieve the NextGen vision. We are facing a major transition effort from our existing system to the NextGen system. It will take both innovation and determination to see the transition through. Given the promise of greater efficiency and capacity, while maintaining the highest levels of safety, all user groups strongly support the move toward NextGen. We now need to reach an agreement on a reliable funding source to pay for its implementation.

GPS satellites will provide safer and more efficient air traffic separation capabilities when the FAA transitions to NextGen. Graphic: FAA



The Stepping Stones to NextGen

The stepping stones to NextGen are already being put in place, including exciting new technologies such as Area Navigation (RNAV), Required Navigation Performance (RNP), Automatic Dependent Surveillance-Broadcast (ADS-B) and System Wide Information Management (SWIM). These technologies offer improved services and the ability to handle increased traffic.

Responsive



Aviation's Contribution to the Economy | The Air Traffic Organization (ATO) must ensure that the aviation system has sufficient capacity to meet future demand. The aviation industry contributes 5.5 percent of the nation's gross domestic product, provides 10 million jobs and is responsible for \$44 billion in exports. If capacity is constrained, the United States will miss the potential economic growth that aviation enables.

Graphic: Noel Noche, FAA

Performance: *Our Bottom Line*

By 2017, the FAA's Office of Aviation Policy and Plans forecasts commercial air carriers will enplane nearly 1.1 billion passengers domestically who will be flown 1.26 trillion passenger miles.

Low-cost carriers will increase their share of the domestic market, and more business jets will be purchased. In addition, a new class of aircraft called Very Light Jets has the potential to flood the airways with a large number of flights.

The current financing mechanisms, largely of commercial airline ticket taxes and fuel taxes, are not tied to FAA's cost to deliver air traffic services, and therefore are not scalable to meet these growing demands. For example, consider two identical aircraft, flying the same route, one full of passengers, and the other only half-full. Although both planes impose the same air traffic control costs on the system, the full plane will contribute far more to the funding of the air traffic control system. Further, when one considers that while a corporate jet consumes the same air traffic control services as a commercial airline, because the corporate jet has no ticketed passengers, under the current financing system, it contributes far less to the funding of air traffic control services than ticketed passengers flying on the commercial airline. The financing reforms create a transparent financing system where aviation users pay for FAA services through user fees and fuel taxes, so that all users pay their fair share of air traffic control services.

The right financing reforms are also necessary for us to implement NextGen efficiently and on schedule—enabling our aviation system to accommodate expected growth in passengers and cargo. The FAA reauthorization proposal creates the flexibility to provide the resources we need for NextGen when we need them, through adjustable cost-based user fees and taxes.

The air traffic control system is outdated and already shows signs that it is capacity-limited during adverse weather. Flight delays are substantially greater in the summer and winter than in the spring and fall. Airlines compensate for the current limited bad weather capacity by adding extra time to their flight schedules, which costs the airlines money in the form of increased compensation or decreased airframe utilization. However, the effect of capacity constraints on delays is nonlinear, with the result that a small increase in traffic can lead to a disproportionate increase in delay.

The ATO has projected that with the current capacity limits in the system, delays will not increase dramatically on good weather days. However, assuming the same weather as 2004, in 2014, there will be 29 days each year that will have more delay than the worst day in 2004. The ability of airlines to absorb this extra delay by increasing their scheduled travel time is limited



The Operational Evolution Partnership continued to achieve concrete results in 2006, with new and extended runways in Atlanta, Minneapolis, Cincinnati and St. Louis. Pictured above is the Minneapolis air traffic control tower.

Photo: FAA

because of the effect on their costs as described above, and an increase in weather delays will likely lead to decreased demand.

The ATO must ensure that the aviation system has sufficient capacity to meet future demand. The aviation industry contributes 5.5 percent of the nation's gross domestic product, creates 10 million jobs, and is responsible for \$44 billion in exports. If capacity is constrained, the U.S. will miss the potential economic growth that aviation enables.

The funding authorizations for the FAA's current program authority and the existing taxes that fund the Airport and Airway Trust Fund (Trust Fund) both expire at the end of fiscal 2007. If there is a lapse in collections in 2007, the Trust Fund balance will not go very far. The uncommitted balance of \$1.9 billion (at the end of fiscal year 2005) would only be sufficient to cover about two months of Trust Fund appropriations. Therefore, it is critical that a new revenue structure be in place before the existing taxes expire.

Getting to NextGen

The funding authorizations for the FAA's current program authority and the existing taxes that fund the Trust Fund both expire at the end of fiscal year 2007. A stable funding system is necessary for successful NextGen development.

Governance

AIR TRAFFIC SERVICES (ATS) COMMITTEE

Created in 2003 by the “Vision 100—Century of Aviation Reauthorization Act,” the Air Traffic Services (ATS) Committee meets quarterly to assess and advise the Air Traffic Organization (ATO). The panel members, who serve three-year terms, are appointed by the President with the advice and consent of the Senate. They are chosen based on their professional experience and expertise in management, customer services, procurement, technology and labor relations. The Administrator of the Federal Aviation Administration chairs the committee.

ATS COMMITTEE

Marion C. Blakey, FAA Administrator and ATS Committee Chair

Phil Brady, President, National Automobile Dealers Association

Leon Lynch, past International Vice President of Human Affairs, United Steelworkers

Sharon Patrick, President and CEO, Sharon Patrick Company

FAA LEADERSHIP



Marion C. Blakey
Administrator, Federal Aviation Administration



Robert A. Sturgell
Deputy Administrator, Federal Aviation Administration
and acting ATO Chief Operating Officer

ATO LEADERSHIP



Eugene D. Juba
Senior Vice President for
Finance Services



Michael Cirillo
Vice President for System
Operations Services



Victoria Cox
Vice President for
Operations Planning Services



Richard Day
Vice President for En
Route & Oceanic Services



D. Bruce Johnson
Vice President for
Terminal Services



Tony Mello
Acting Vice President for
Safety Services



Sandra M. Sanchez
Vice President for
Communications Services



James H. Washington
Vice President for Acquisition
& Business Services



Steven B. Zaidman
Vice President for Technical
Operations Services

Safety is Our Passion

We're world leaders in aerospace safety.

Quality is Our Trademark

We serve our country, our customers and each other.

Integrity is Our Character

We do the right thing, even if no one is looking.

People are Our Strength

We treat each other as we want to be treated.

ACRONYMS

ADIZ - Air Defense Identification Zone

ADS-B - Automatic Dependent Surveillance-Broadcast

ADTN - Agency Data Telecommunications Network

AFP - Airspace Flow Program

AMASS - Airport Movement Area Safety System

ASDE-X - Airport Surface Detection Equipment-Model X

ASR-11- Airport Surveillance Radar-Model 11

ATO - Air Traffic Organization

ATOP - Advanced Technology and Oceanic Procedures

ATS - Air Traffic Services

CAASD - Center for Advanced Aviation System Development

ECG - En Route Communications Gateway

EBUS - En Route Backup Surveillance System

ERAM - En Route Automation Modernization

ERIDS - En Route Information Display System

FSAS - Facility Safety Assessment System

FTI - FAA Telecommunications Infrastructure

FY - Fiscal Year

HCS - Host Computer System

GAO - Government Accountability Office

GPS - Global Positioning System

ICAO - International Civil Aviation Organization

IFR - Instrument Flight Rules

ITWS - Integrated Terminal Weather System

JPDO - Joint Planning and Development Office

LAAS - Local Area Augmentation System

NAS - National Airspace System

NextGen - Next Generation Air Transportation System

OEP - Operational Evolution Partnership

RNAV - Area Navigation

RNP - Required Navigation Performance

RWSL - Runway Status Lights

SAAAR - Special Aircraft and Aircrew Authorization Required

STARS - Standard Terminal Automation Replacement System

SWIM - System-Wide Information Management

TARP - Traffic Analysis and Review Program

TFM - Traffic Flow Management

TMA - Traffic Management Advisor

TAMR - Terminal Automation Modernization and Replacement

TRACON - Terminal Radar Approach Control

UAS - Unmanned Aerial System

URET - User Request Evaluation Tool

VLJ - Very Light Jets

WAAS - Wide Area Augmentation System



Photo: Melvin Brown II, FAA

Air Traffic Organization

Performance: *Our Bottom Line*

2006 Annual Performance Report

	Gate	Remarks
	23	Now 10:11A
	35A	On Time
	30	On Time
A	19	On Time
A	17	On Time
A	15	On Time
P		On Time
P	17	On Time
P	15	On Time
DA	22	On Time
5A	45	On Time
0A	33	On Time
5A	45	On Time
0A	22	On Time
20A	22	On Time
45A	45	On Time
50A	33A	On Time
45P	45	On Time
AM		



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